

# Scientific Innovation in International Pandemic Lawmaking

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2021-10-18T18:08:37

Perhaps there is some Utopia where scientific research could immediately provide us all the accurate data on a novel disease's severity and fatality rate. No doubt some (although not everyone) believe that such an ideal world would include mathematical models that could accurately predict both the disease's pattern, as well as the effectiveness of the array of medical and non-medical tools to confront it. In this imaginary reality, data could tell us exactly to what extent restrictive public health measures are necessary in a given society to limit the spread of a pathogen, and it would be shared without constraints across the globe. Moreover, in this mythical world, there would be no distance between research and its application, as policymakers would simply need to draw from existing information to "make the right call." Failsafe mechanisms would be in place to avoid the temptation of either altering scientific data, or using it for partisan motives. And, needless to say, in an ideal world, both research and the products of scientific innovation, including diagnostics, therapeutics and vaccines, would be available to everyone, globally, on the basis of need rather than ability to pay.

No such world is possible because science does not work that way. However, the broken world in which we find ourselves underscores the central imperative of reflecting on how lawmaking can be deployed to advance scientific innovation and equity.

The novel SARS-CoV-2 virus laid bare the limits of "objective" scientific recommendations, which evolved continually and continue to do so. Mathematical models produced by the [Institute for Health Metrics and Evaluation](#) and other similar indicators were wrong more often than they were right. In some countries, science-based recommendations were blatantly manipulated to suit partisan purposes, with deadly consequences. In many others, governments guided by committees of experts, epidemiologists, and infectious disease specialists struggled to take stock of multiple dimensions of the impact of both COVID-19 and the manifold public health measures adopted to face it. Numerous studies have found that both laissez-faire policies underplaying the need for protection and restrictive measures adopted over the last 18 months have exacted a disproportionate toll on persons in situations of vulnerability, from informal workers to persons with disabilities.

On a global level, rather than countries being straightforward with their data, painting a positive picture of the country's pandemic response often took precedence over collecting and disseminating accurate epidemiological as well as other information. This lack of transparency hindered any attempts at a global system of disease surveillance meant to convey information efficiently and accurately to all countries, which may itself have revealed itself as a thin, "performative accountability," as Maharan terms it.

Moreover, scientific innovations leading to effective diagnostics, therapeutics, and vaccines against COVID-19 were heavily underwritten with public monies but have been allocated according to a market logic that suits the interests of pharmaceutical companies. Although developed in record time, as pointed out in [this symposium's Launch Editorial](#), the overwhelming preponderance of vaccine doses have been delivered to wealthy countries, while countries in Sub-Saharan Africa did not meet even the scaled-back aspirations announced by the WHO of 10% coverage by the end of September through the COVAX Facility. There are a variety of views on how to make the most of the relationship between scientific innovation and intellectual property regulation, but the business-as-usual model of patent protection coupled with exclusive control over technological know-how and manufacturing capacity is clearly unsuited for a global pandemic.

If it is safe to say, as Sheila Jasanoff foresaw at the pandemic's onset, science [“did not come on a white horse with a solution.”](#) At the same time, science denialism has led to catastrophic results in some countries, [such as Brazil](#). Moreover the pandemic has made clear that the world we live in faces a crisis of trust in democratic institutions from which health is no longer exempt. An [“infodemic” around COVID-19 is rampant](#), spread through informal channels, including, but not limited to, social media, as well as through governmental channels. Misinformation and disinformation have maximized distortions of findings and fueled reactionary movements against pandemic responses throughout high-, middle- and low-income countries alike.

Looking forward, more inclusive models for scientific data sharing at the international level clearly can and must be devised. Doing so will require stronger commitments by states, improved multilateral mechanisms, and legal rules that facilitate the fair allocation of fruits of scientific progress without influence from competing agendas.

We must also scrutinize the parties setting research priorities during (and outside of) global public health emergencies. As highlighted in [recent discussions in The Lancet](#), conducting cutting-edge biomedical and other types of research can be cost-prohibitive for many low- and middle-income countries. Moreover, [some suggest](#) that the focus on the “emergency” aspect of the pandemic ignores endemic health challenges in much of the world and skews both scientific machinery and legal rules toward prioritizing problems affecting countries from the Global North.

Whether it is catering to the for-profit private sector's own priorities, or to the temptation of using research as a geopolitical instrument rather than a vehicle for solidarity, numerous actions we have witnessed during COVID-19 warrant deeper scrutiny as the world considers a pandemic law-making exercise.

The contributions in the current Symposium address these and other issues related to scientific innovation and the rights to the benefits of scientific progress with nuance, while offering several creative proposals. The second webinar will focus in particular on the hurdles for increasing the availability and accessibility of scientific innovations during a pandemic, and how a pandemic law-making exercise can better tackle [the science-policy interface](#), as Gian Luca Burci discusses in his post.

Whether international law can enable solutions to any of these challenges ultimately depends on the prevailing political will of the governments at the table. Nonetheless, should these leaders disregard the need to revise rules regarding the development, communication, and sharing of scientific innovations in pandemic preparedness and response, they would be doing the world a major disservice.

*Pedro A. Villarreal, on behalf of the editors*

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